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Creative Thinking and Idea Generation

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Who?

Jane Nolan MBE

Entrepreneur and Enterprise Educator supporting the work of Newcastle University Careers Service

MD Venture Coaching and Consulting Ltd

2nd Year PGR

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Today's Session

- Techniques and Tools for Creative Thinking and Idea Generation
- Trying some techniques out
- Brief introduction to Rise Up and how we can help
- Visit to the Elevator Ideas Incubator

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Innovation and Creativity

How would you define them?

What skills do you need?

5 minutes working with your neighbours

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Oxford Dictionary definition

creativity(cre¦ativ|ity)

noun

[*mass noun*] the use of imagination or original ideas to create something; inventiveness: *firms are keen to encourage creativity*

Oxford Dictionary definition

innovation(in¦nov|ation)

noun

[*mass noun*] the action or process of innovating: *innovation is crucial to the continuing success of any organization*

[*count noun*] a new method, idea, product, etc:*technological innovations*

Creativity

- Creativity – coming up with something new and original
- Skills of – flexibility, originality, fluency, elaboration, brainstorming, modification, imagery, associative thinking, attribute listing, metaphorical thinking, forced relationships
- Imagination and curiosity

Adapted from Bloom's Taxonomy, Benjamin Bloom (1956)

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Innovation

- The **process** of making improvements by adding something new.
- Looking for what will work and will be economically viable as products, services, processes
- Skills for R&D, new product development, flexibility, effective project management, understanding needs, being customer centred, engaging people/organisation

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Creativity and Innovation

Creativity involves imagining a new reality and innovation is required to make it work.. (by) developing ideas into applications and solutions.

David Rae (2007)

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Creative Thinking and Idea Generation

- Mindset…
  - In order to be in any profession you need a set of skills and techniques i.e. to be an engineer you need the appropriate knowledge and skills
  - In order to generate new ideas you need the skills and knowledge and, critically, the ability for flexible thinking
  - Tools don't give you the creative ideas, they switch on the behaviours that do

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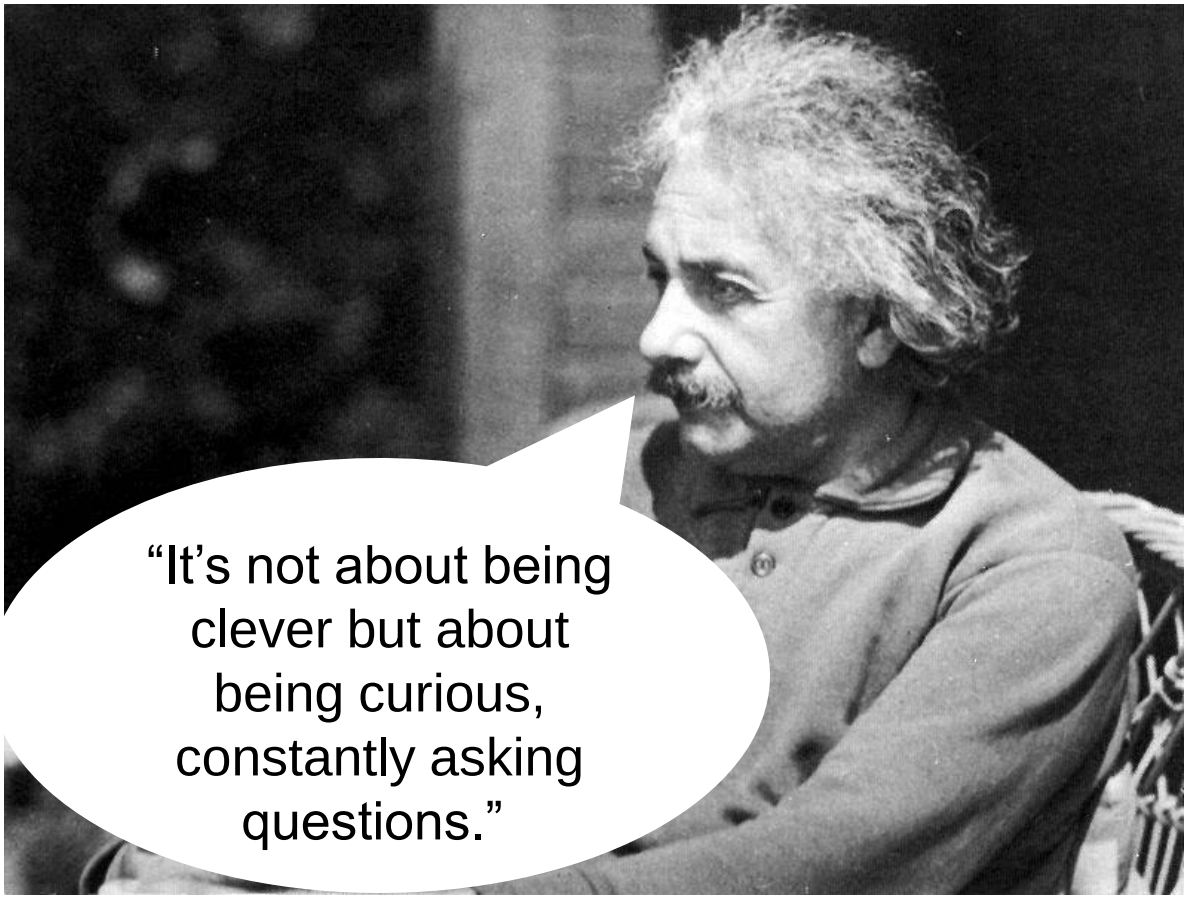
How to…



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Gardner's 7 Intelligences

- Dr Howard Gardner of Harvard University questions whether intelligence can be measured by the IQ test because it only measures a small part of the vast potential of the human brain and what he perceives as 'intelligence'.
- He has developed a theory of multiple intelligences - 7 areas of intelligence which are present in each individual to a greater and lesser extent depending on genetic and environmental factors.

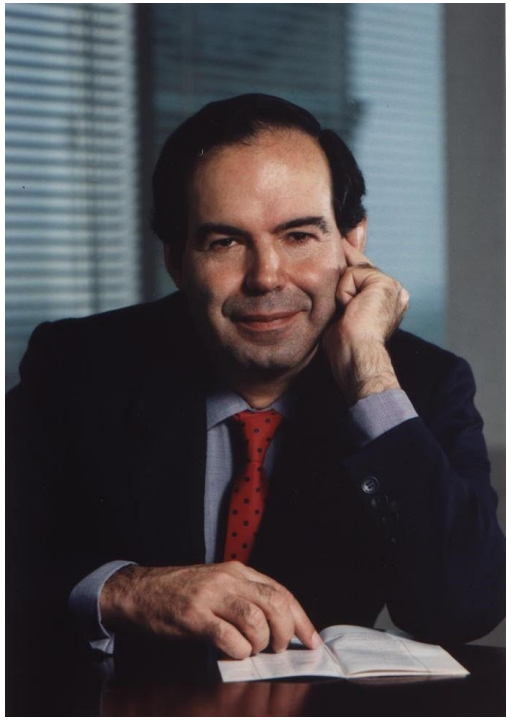
- **Linguistic Intelligence:** language, expression through words.
- **Logical-Mathematical Intelligence:** manipulation of numbers, problem solving.
- **Visual-Spatial Intelligence:** visualisation, model-making, spatial awareness.
- **Bodily-Kinesthetic Intelligence:** movement, use of body.
- **Musical Intelligence:** sensitivity to sound, music and rhythm.
- **Interpersonal Intelligence:** sensitivity to other people, good communication.
- **Intrapersonal Intelligence**: sense of self, aware of emotions, strengths.

Gardner's 7 Intelligences

- Although it is not possible to measure these intelligences, it is recognised that people think and learn in different ways
- Use together rather than independently, complement each other in developing skills and solving problems
- Can put to creative use
- Take knowledge gained in one area and transfer, explore and apply in another

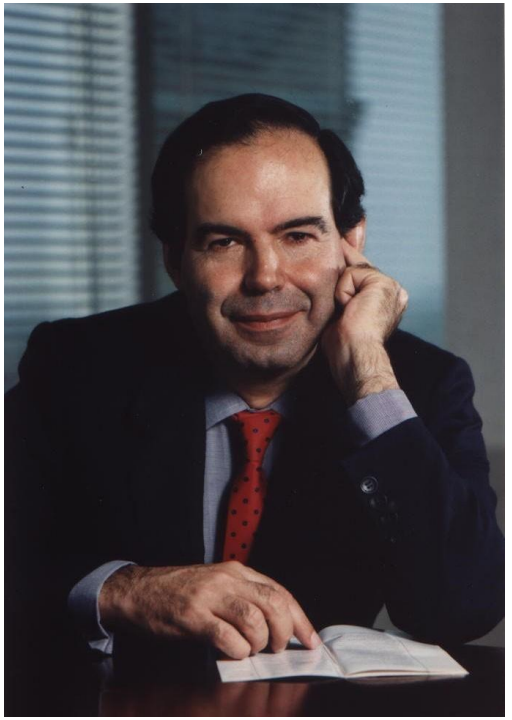
Edward de Bono

- M.D., Ph.D., (philosophy, medicine & psychology), Rhodes scholar
- World-renowned consultant to business, governments, schools and industry
- Author of 62 books in 40 languages



Edward de Bono

- Originator of Six Thinking Hats, Lateral Thinking and Direct Attention Thinking Tools
- Lateral thinking – the ability to solve problems by taking indirect or creative approaches



Traditional argument

- In traditional argument each side prepares a case and then seeks to defend that case and attack the other case.
- Exploration is limited!

4 Critical factors for lateral thinking

- Recognizing dominant ideas that polarize perception of a problem
- Searching for different perspectives and ways to look at the problem
- Relaxing the normal rigid control of thinking
- Encouraging the use of chance to encourage other ideas

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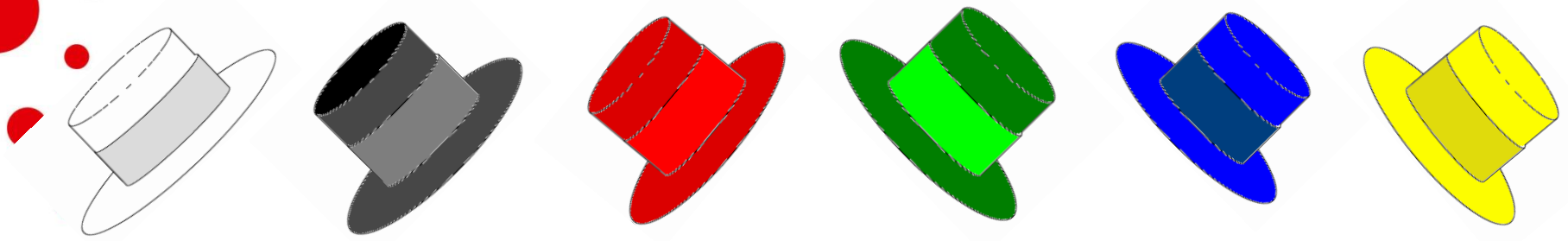
Edward de Bono's Six Thinking Hats

- A technique which allows you to take different perspectives on an issue or idea and think about alternative ideas to move forward



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Six Thinking Hats

- Based on the idea of a Thinking Cap
- By taking different approaches and perspectives – come up with better, more creative solutions, better thought through
- People tend to have preferred ways of thinking – may not be comfortable outside their usual style
- Wearing each hat helps us adopt different thinking styles

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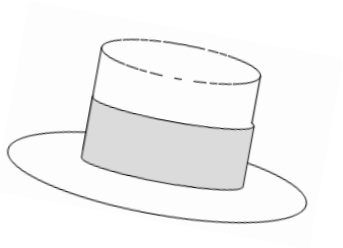
White hat thinking



- Information and data
- Indicates a focus on information
- What do we have?
- What information do we need?
- How are we going to get the information we need?
- Where do we source it?

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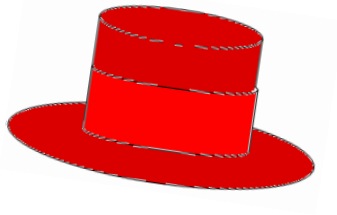
Red hat thinking



- How do you feel?
- The red hat gives full permission for the expression of feeling, emotions and intuition
- No need to give the reasons or justifications behind the feelings.

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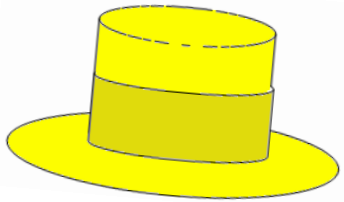
Yellow hat thinking



- Why it *may* work
- Focus on values, benefits and how something can be done
- What is the good in it?
- Give logical reasons

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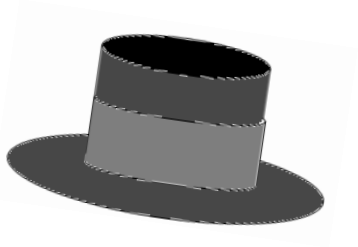
Black hat thinking



- Why it *may not* work
- Caution
- Dangers
- Problems
- Faults, weaknesses
- What might go wrong and why something does not fit
- Logical reasons

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Green hat thinking

- The creative hat!
- Sets aside time, space and expectation for creative effort
- Possibilities, alternatives
- New ideas
- Overcome black hat problems
- Reinforce why it might work (yellow hat thinking)

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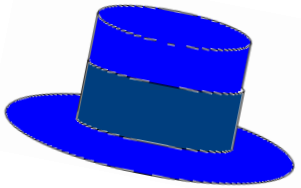
Blue hat thinking



- Managing the thinking
- Setting the focus
- Organisation of thinking
- Making summaries
- Overviews
- Conclusions
- Action plans

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Blue Hat

Managing The Thinking

Setting The Focus
Making Summaries
Overviews - Conclusions
Action Plans

White Hat

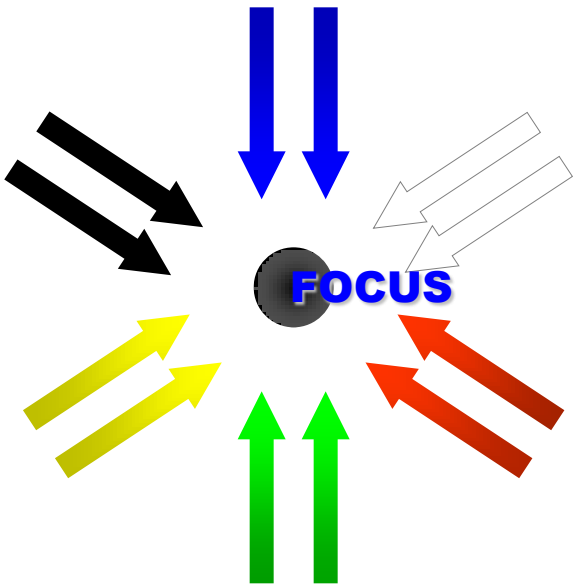
Information & Data

Neutral & Objective
Checked & Believed Facts
Missing Information &
Where To Source It

Black Hat

Why It May Not Work

Cautions - Dangers
Problems - Faults
Logical Reasons
Must Be Given



Yellow Hat

Why It May Work

Values & Benefits
(Both Known & Potential)
The Good In It
Logical Reasons
Must Be Given

Red Hat

Feelings & Intuition

Emotions Or Hunches
"At This Point"
No Reasons or Justification
Keep It Short

Green Hat

Creative Thinking

Possibilities - Alternatives
New Ideas - New Concepts
Overcome Black Hat Problems &
Reinforce Yellow Hat Values

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Idea generation

"The world is moving so fast that the person who says it can't be done is generally interrupted by someone doing it."

Elbert Hubbard

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Why do businesses start?

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Ways to Find Ideas

- Copy somebody else's successful idea
- Combining ideas in a new way
- Solving problems for people
- Develop your hobbies/skills
- Listen when people say "if only…"
- Look for 'gaps' in the market
- Improve a product, service or process
- Think in new ways – creative, imaginative etc.
- Find out what the competition is bad at!
- Completely new ideas
- Additions to ideas

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If only.....

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Idea vs Opportunity

- Ideas don't cost a lot to generate
- Setting up a business and producing products or services does
- Have plenty of ideas but make sure that only true opportunities are taken forward as a business
- What need is being fulfilled?
- What is the sustainable MARKET?

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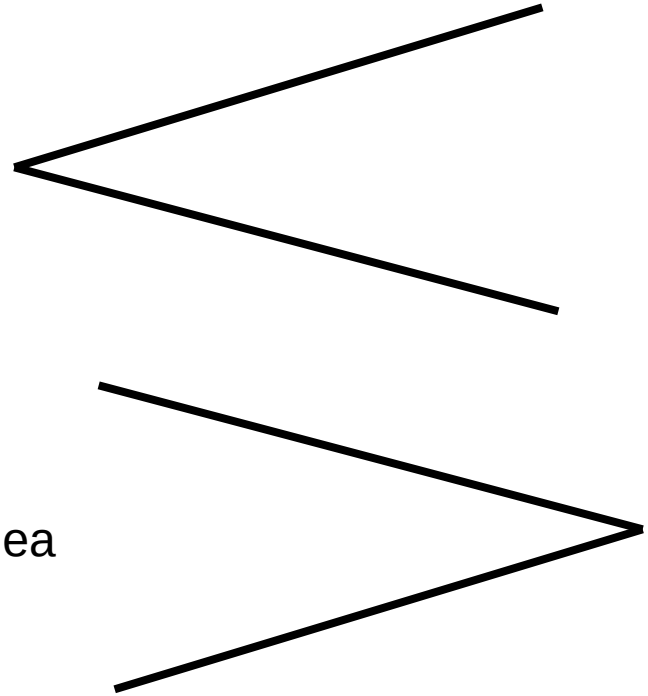
Creative Thinking

Divergent



Quantity of ideas

Finding the best idea

Convergent

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Divergent Thinking

- Determine goals, explore possibilities
- Generate ideas – lots of them!
- Think as widely as possible
- Don't think about why you can't do something
- Include the obvious and seemingly impossible
- Don't judge the ideas

"I wish..." "If only....."

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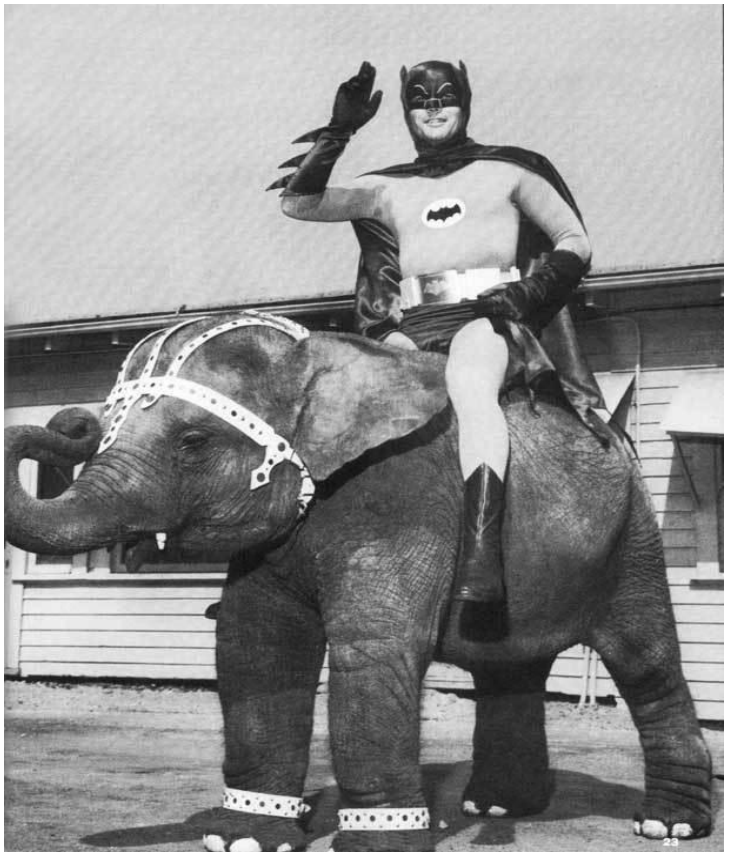
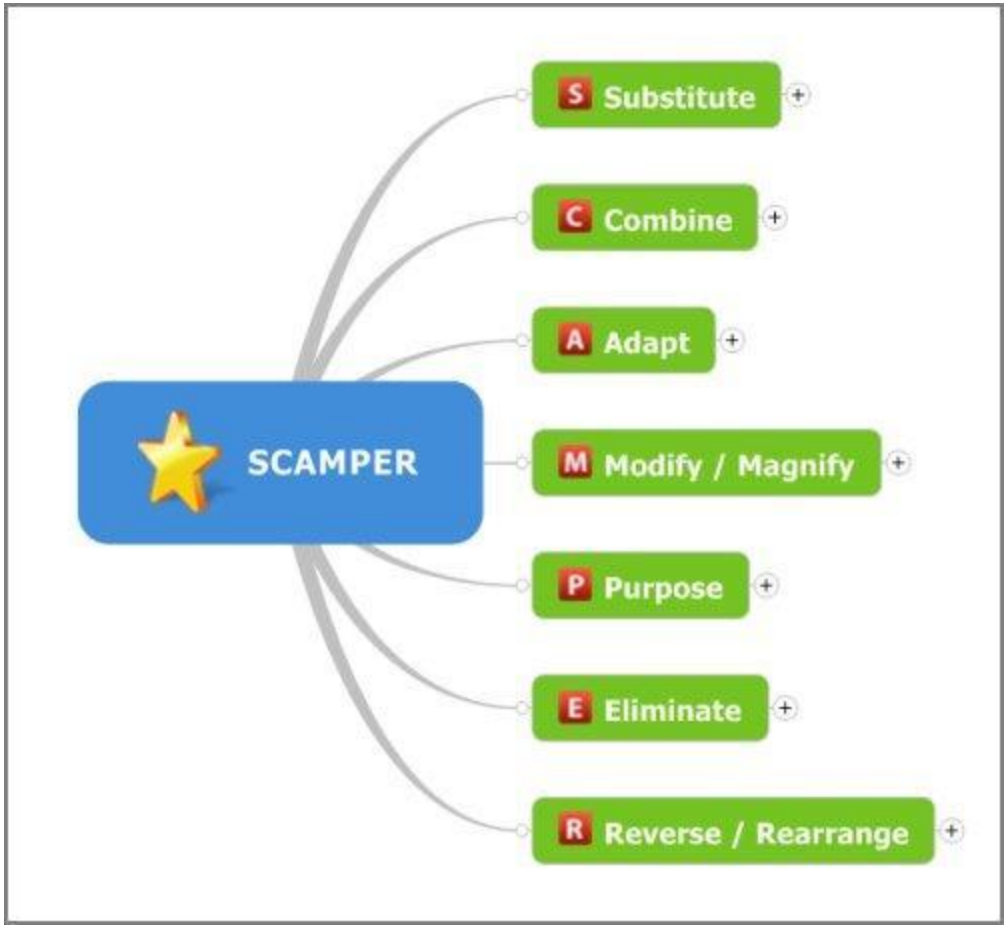
BRAINSTORMING:
As many ideas as possible
No such thing as a silly idea
Impractical ideas OK!
No criticism
No judgements
“Yes and”....not “Yes but”




SCAMPER
S Substitute
C Combine
A Adapt
M Modify / Magnify
P Purpose
E Eliminate
R Reverse / Rearrange

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Substitute/combine

+

=

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Combine

Mars
Mars
milk chocolate
with soft nougat
and caramel centre

+

=

ICE CREAM
Mars

Adapt

Modify

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=

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Purpose - Put to other Uses

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Eliminate

Reverse/rearrange

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World Cafe

- Addresses significant questions through purposeful conversation
- Sharing and recording knowledge, insights and ideas in words and pictures
- Thinking divergently – If only..., I wish.....
- Moving between tables and working with different people
- Creating networks of connections, cross pollinating ideas
- Final table – convergent thinking – how might this be made possible?

Adapted from Brown, Issacs et al (2005) The World Cafe: Shaping our Futures through Conversations that Matter, First Edition: Berret-Koehler Publishers

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Convergent Thinking

Review the ideas generated, cluster them - consider the question "**How might we....**"

Combine ideas, refine, reject, select,

Analyse options

Focus on the ideas with the most potential

Use criteria to evaluate –

Is there a sustainable market? What need does it fulfil? What resources are needed? Is it feasible? Is it an opportunity?

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Negative Ideas Shower

- Choose any product/service
- List the disadvantages and weaknesses in this product/service on flip chart paper
- Create something new that addresses these issues

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David Rae

- Creating, recognising, developing & exploiting opportunities
- Idea vs Opportunity
  - Demand?
  - Innovation?
  - Feasibility?
  - Attraction?
- Opportunities can answer these questions

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Assessing Opportunities

- Is it an idea or an opportunity?
- Is it a current or future opportunity?
- Has anyone else seized it?
- Is it distinctive and different from existing approaches?
- What resources (knowledge, skills, finance, technology etc) would be required to make it happen?
- Is it compatible with my goals, interests and experience?

David Rae (2007)

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Idea Generation

- Either an ideal wallet/purse or the idea you had earlier about something that frustrates you
- Divergent thinking phase – brainstorming on flip chart paper
- Use SCAMPER and/or a negative ideas shower and/or WWWWWH to provoke more ideas

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Creating your Business

Next session: Business Planning Tool Xing

90 crucial decisions

What is your business?

10 words - that pass the Grandma test – please bring them next time!

How will you get it up and running?

How will you ensure viability?

Operational activities on a time frame

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Summary

- Have thought about the nature of creative thinking and idea generation
- Considered how creative thinking tools and techniques can help us have creative ideas – both for business and a wide range of contexts – and when are ideas opportunities?
- And Finally – How Rise Up can help you.....

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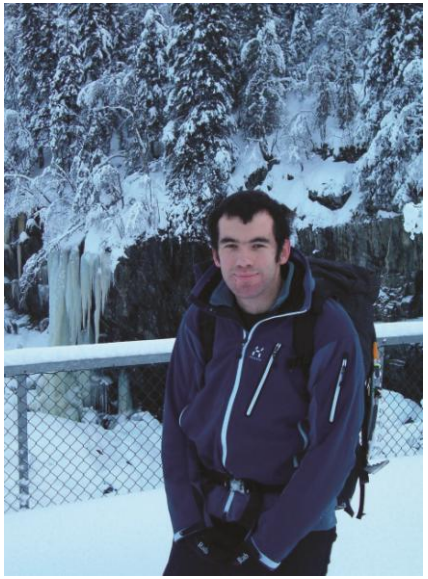
Start-up Support

- Business Advice and Information
- Grants
- Elevator – Ideas Incubator

  Market research facilities

  - Cobra
  - Mintel



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Awards

- Blueprint
- Santander Business Incubation Awards
- ABC Award

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NU Enterprise Programme

– Starter Sessions
– Masterclasses
– Networking & Clinics

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SIFE – Students in Free Enterprise

www.sife.org

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Student Society

Newcastle University Entrepreneur Society

Check out the facebook group

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Entrepreneurial Researchers

- Solvers Series
- Commercialisation and Intellectual Property
- BiotechnologyYES
- Enterprise

Scholarships

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More opportunities

– Breakfast Clubs
– Networking opportunities
– Enterprise Interns

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Rise up

and join the entrepreneurial revolution.

Follow your passion.
Don't follow the norm.
Don't take no for an answer.
Don't accept mediocrity.
Don't curb your enthusiasm.
Don't be afraid to do your own thing.
I believe I can do better.
I want to make the rules.
I know I can make a go of it.
I want to work for myself.

Visit www.ncl.ac.uk/careers/riseup
to start your own revolution today.

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Contact

Drop in and see us!

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